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10/027,641	12/19/2001	In-Hak Park	5484-089	1483

7590

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EXAMINER

PHAM, HOA Q

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/027,641

Applicant(s)

PARK ET AL.

Examiner

Hoa Q. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Specification*

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

With respect to the present abstract, the abstract should be limited to a single paragraph, and the terms "means" and "said" should be avoided.

3. The disclosure is objected to because of the following informalities:
  - a. Page 7, line 3, the reference number "34" is not shown in figures.
  - b. Page 10, lines 16-31, the numbers such as "32", "20", "38", etc. are not shown in figures, especially, figure 7.
  - c. Claim 1, line 2, the term "water" should be changed to --wafer--.
  - d. Claim 1, line 8, the term "senor" should be changed to --sensor--.

- e. Claim 3, line 2, the term "wafers" should be changed to -wafer--.

These are some of examples; applicant is required to correct all of the minor informalities such as typos, grammars, inconsistent use of terms (and/or numerals).

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 1 is vague and indefinite because it seems that that the "sensor" in line 12 refers back to the "sensor" in line 8, but the sensor in line 8 is not used for detecting the position of the wafer, it is for detecting state of fluid.

b. Claim 15 recites the limitation "the sensing means" in line 9. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyama et al (5,194,743) in view of Vogtmann et al (6,131,589).

Regarding claims 1, 8, 9, 13, 15, and 18, Aoyama et al discloses a device for positioning circular semiconductor wafers which has all the features of the present invention except for the use of a pressure sensor; however, such a feature is known in the art as taught by Vogtmann et al. Vogtmann et al, from the same field of endeavor, discloses a device for positioning of a wafer in which the pressure sensor (56) is inserted in the branches (50 and 52) to permit equalization of the flow through the nozzles 942,44,46) (figures 16). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include in Aoyama et al a pressure sensor as taught by Vogtmann et al. The rationale for this modification would have arisen from the fact that using such pressure sensor would control the pressure of the flow at a constant level, thus increase the accuracy of the measurement.

Regarding claims 2-3, see grooves 102a in figures 16 and 17 of Aoyama et al.

Regarding claims 4-7, the grooves are arranged in the radial direction (see figure 16 of Aoyama et al).

Regarding claims 10, 16 and 17, see position detector (20,24) in figure 2 of Aoyama et al.

Regarding claim 11, see rotational driving device (5,11,17) in figure 2 of Aoyama et al.

Regarding claim 12, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include in Aoyama et al a warning signal

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such as an alarm, a lamp or a display to alert the operator when the wafer is abnormal placed.

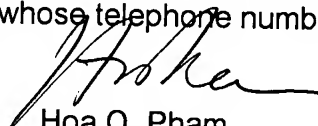
Regarding claim 14, a chamber having a vacuum state is well known in art.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Following references are relative to the wafer alignment and wafer position detection: Nakazato et al (4,887,904), Satoh et al (5,979,475), Apgar et al (4,029,351) and Nishizuka et al (4,298,273).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa Q. Pham whose telephone number is (703) 308-4808. The examiner can normally be reached on 6:30 AM to 5 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (703) 308-4881. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Hoa Q. Pham  
Primary Examiner  
Art Unit 2877

HP  
June 14, 2003